

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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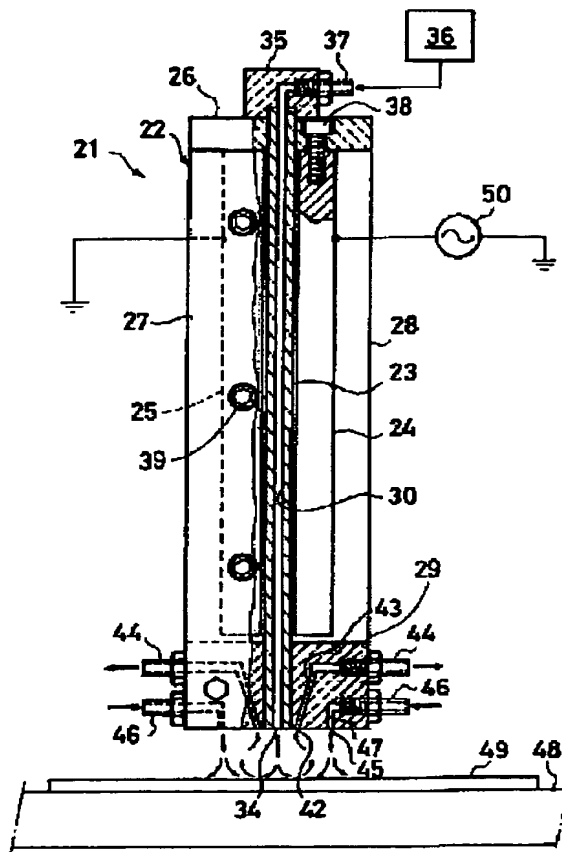
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TITLE : SURFACE TREATMENT DEVICE



**ABSTRACT :** PROBLEM TO BE SOLVED: To keep treatment rates high, simplify the structure and assembly of a device, and perform a local surface treatment by eliminating the need for cooling electrodes against heat generated by a discharge.

**SOLUTION:** Two quartz glass plates 31, 32 are opposed to each other with a predetermined interval, and are bonded together on both right and left sides using a resin material 33 to form a nozzle 23 inside which a vertical gas flow passage 30 is defined. The nozzle is held by nozzle holders 26 to 29 each made from a ceramic material. A source electrode and an earth electrode are placed on each side of the nozzle and are each secured on its upper side and one side by bolts 38, 39 in such a way that some play 40, 41 is provided on its lower side and the other side with respect to the nozzle holders. A discharge gas is introduced into the gas flow passage from the upper end of the nozzle, a discharge is caused between both electrodes to produce an excitation active seed for the discharge gas, and the flow of discharge gas containing the seed is ejected from a gas outlet 34 at the lower end of the nozzle toward the surface of a material 39 to be processed.

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